CITY OF KENT POSITION DESCRIPTION

Position Inventory Number: PW544
Classification Specification: Engineer Technician II
Classification Specification. <u>Lingifieer recrimician 11</u>
Salary Range: NR 29
Position Description: GIS Technician
Incumbent: Sarah Burns
Location: Public Works – Engineering/Design

GENERAL PURPOSE:

Under the direction of the GIS Supervisor, or designee, perform technical work in the use of Geographic Information System (GIS) software, workstations, and digitizing equipment.

Work is characterized by a substantial amount of database development and maintenance from a Citywide computer mapping system and central database of geographic information. The incumbent is responsible for performing a variety of technical duties related to GIS support and applications, infrastructure mapping, query, map creation, and input of data into the GIS; maintaining a variety of records; providing assistance and information to City employees, the general public, and other agencies; maintaining detailed and accurate records including comprehensive sewer, water, and storm drainage maps, topographies, orthophotos, boundary, street, and right-of-way maps, and other materials related to the Public Works projects.

Work is performed under general supervision. The supervisor defines objectives, priorities, and deadlines; and assists the incumbent with unusual situations, which do not have clear objectives or precedents. The incumbent plans and carries out assignments and handles problems and deviations in accordance with instructions, policies, procedures, and/or accepted practices. Work is evaluated for technical soundness and conformity to practice and policy.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Edit existing map layers using several methods; digitizing from as-builts and other map sources; onscreen editing based on field reports; and uploading from digital source files.

Create map layers by digitizing from as-builts and other map sources or importing data from digital sources (ASCII & binary computer files).

Attribute new and existing map layers.

Perform spatial operations on GIS data including complex intersections, unions, and identities through overlays of map layers and creation of buffer zones surrounding features.

Create map compositions for onscreen display and graphics output; utilize ESRI scripting language for processing, analysis, and map creation.

Perform analytical operations using results of overlays and buffers to produce new datasets.

Perform query operations on GIS to identify features, attributes, and spatial orientation of designated geographic areas.

Verify attribute data through consistent quality-control checks performing frequencies, statistics, and summaries.

Establish geographic relationships between new and existing data through proper projection and scale.

Verify integrity of spatial data by review of source data to include assessors maps, lot line revisions, and plat maps; compare with other vector map layers and/or ortho-imagery overlay; perform visual inspection of electronic map layers; and attribute new and existing map layers.

Provide guidance, instruction, and interpretation to City employees concerning GIS software applications and data.

Prepare and transfer GIS data to the citywide network.

Maintain content on the City's GIS website.

Develop end-user applications utilizing GIS software programs to perform different operations.

Create summaries and reports as requested.

Become familiar with, follow, and actively support the vision, mission, values, and behavior statements of the department and the City.

PERIPHERAL DUTIES:

Perform related duties as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES:

KNOWLEDGE OF:

- Geographic Information Systems, particularly ArcGIS
- CAD technology, particularly Autodesk applications (AutoCad).
- Cartography
- Methods, techniques, and instruments used in digitizing data with appropriate accuracy and quality controls
- Principles and practices of cartography, surveying, and mapping
- Interpretation of engineering plans and aerial photography

- Municipal government policies, procedures, and structure; and applicable local, state, and federal laws, codes, regulations, and ordinances
- Technical aspects of field of specialty
- Correct English grammar, spelling, punctuation, and vocabulary
- Effective telephone techniques and etiquette

SKILLED IN:

- Researching, collecting, and inputting data
- Using effective oral and written communications
- Using interpersonal skills effectively in a tactful, patient, and courteous manner
- Using correct office practices, procedures, and equipment
- Using current GIS and operating system programming languages

ABILITY TO:

- Assist in the design, development, and maintenance of the City's GIS database
- Catalog and evaluate source documents
- Read, review, and understand aerial photographs, assessor's maps, and engineering plans
- Operate computer hardware peripherals, such as digitizers and plotters, operating systems, and associated software packages that form the City's GIS
- Work independently with little supervision
- Show initiative in performing job functions
- Plan and organize work to meet schedules and timelines
- Work from blueprints, engineering plans, and specifications
- Work effectively on several projects concurrently and complete work with many interruptions
- Analyze situations accurately and adopt an effective course of action
- Work in a team environment to help solve complex problems
- Prepare and maintain clear and accurate routine reports, correspondence, and procedures
- Read, understand, apply, and explain documents such as policy manuals, technical computer manuals and procedures, and business periodicals; applicable laws, codes, regulations, and legal descriptions
- Communicate complex technical ideas in lay-person's terms to assist the general public, City employees, contractors, realtors, and others
- Establish and maintain effective working relationships with co-workers, City staff, officials, contractors, realtors, and others
- Effectively present information and respond to questions in one-on-one situations
- Understand and follow oral and written directions
- Apply common sense understanding to solve practical problems and deal with several variables in standardized situations
- Import and export various file formats

EDUCATION AND EXPERIENCE REQUIRED:

Education: High school diploma, or equivalent, supplemented by two (2) years college-level

course work related to GIS, engineering, mathematics, surveying, drafting,

computer science, cartography, or civil engineering; and

Experience: Three (3) years of increasingly responsible GIS experience.

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Or:

In place of the above requirements, the incumbent may possess any combination of relevant education and experience which would demonstrate the individual's knowledge, skill, and ability to perform the essential duties and responsibilities listed above.

LICENSES AND OTHER REQUIREMENTS:

- Valid Washington State Driver's License, or the ability to obtain within thirty (30) days of employment
- Must successfully pass the City's pre-employment driver's records check; successfully complete the City's Defensive Driving Course; and maintain an excellent driving record

MACHINES, TOOLS, AND EQUIPMENT USED:

Standard and specialized hand and power machines, tools, and equipment used in Geographic Information Systems (GIS) including, but not limited to, GIS software, workstations, digitizing equipment, and plotters.

The incumbent may also use typical business office machinery and equipment including, but not limited to, personal computer and related software such as word processing and spreadsheet programs, printing and lettering machines, telephone, fax and copy machines, calculator, paper trimmer, squares, and engineer scale.

In addition, the incumbent may be required to operate a City vehicle to conduct occasional fieldwork.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, or feel; talk; and hear. The employee frequently is required to sit for extended periods of time and type on a keyboard. The employee is occasionally required to stand; walk; reach with hands and arms; climb or balance; and stoop, kneel, crouch, or crawl. The employee must occasionally lift and/ or move up to 30 pounds.

Specific vision abilities required by this job include close, distance, color, and peripheral vision; depth perception; and the ability to adjust focus.

WORKING CONDITIONS:

Work is usually performed in an indoor office environment. Occasionally the employee will be required to drive off-site for field work. While performing the duties of this job, the employee may occasionally be exposed to outdoor weather conditions. The employee is occasionally exposed to fumes or vehicle traffic. The noise level in the work environment is usually moderate in the office and loud in the field.

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SIGNATURES:

Incumbent's Signature

Date

Supervisor's Signature

Date

Approval:

Employee Services Director/Designee

**Note:

This document will be reviewed and updated annually at the time of the employee's performance appraisal; when this position becomes vacant; or, if the duties of this position are changed significantly.

Revised: 7/27/07; 9/20/07; 11/19/07